## **PIN PONG**

**Operation and Maintenance Manual** 



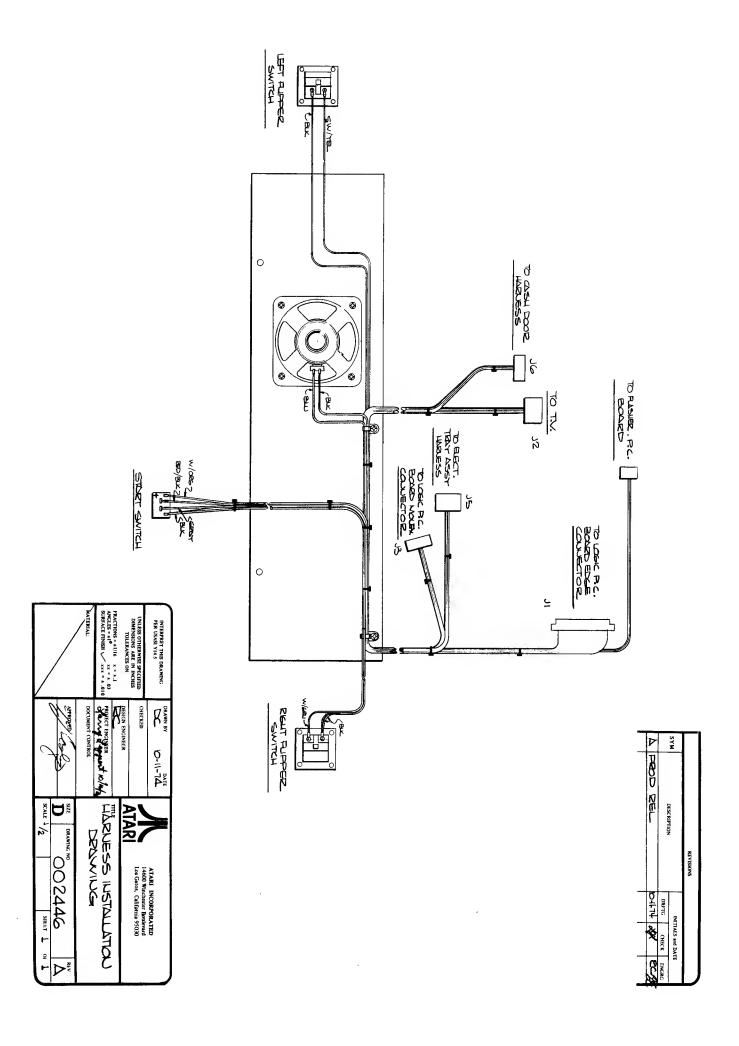
P.C. BOARD ASSEMBLY Job Title Dwg.P/L 001660-01 PIN PONG - 60 HZ <u>hecticulion</u> sheet 1 of 2 Drawn Cynthia Checked Mech. Eng Rev. **ATAR** Proj. Eng. Jan Dock  $\subseteq$ Elec. Eng. Varry Rev. Description ApprvRev. Description Apprv. PROD. REL <u>C</u>  $\Box$ REV PER ECN 751,811,812 E Rev per ECN 926 F Rev per ECN 971 REV PER ECH 1071 Ci Item Qıy. Part. No. Description 1 72062/37-74L00 1 Integrated Circuit, 74L00 2 72000/37-7400 8 7400 3 72001/37-7402 7 7402 72002/37-7404 11 4 5 7404 5 11 72027/37-7408 8 7408 6 72003/37-7410 11 7 7410 7 72061/37-7414 \*\* 1 7414 \* \* 8 \*\* 72004/37-7420 5 7420 72006/37-7427 \* \* 9 2 7427 10 11 72007/37-7430 2 11 7430 11 11 72064/37-7432 1 7432 72008/37-7448 11 11 12 1 7448 13 72010/37-7474 20 7474 14 72059/37-7485 2 7485 15 72012/37-7486 8 11 7486 16 72013/37-7490 \*\* \*\* 7490 17 72014/37-7493 11 3 7493 72015/37-74107 11 18 4 74107 19 72016/37-74153 2 11 74153 20 72060/37-74164 1 74164 21 72035/37-74193 5 11 11 74193 22 \*\* 72024/37-9312 4 9312 11 11 23 72036/37-9314 3 9314 24 11 72017/37-9316 3 11 9316 25 72031/37-9321 1 11 9321 \*\* 26 72025/37-9322 \*\* 4 9322 11 27 72026/37-9602 1 9602 28 72057/37-LM323K 1 LM323K 11 11 29 72048/37-LM380 1 LM380 11 30 72058/37-MC4024 11 1 MC4024 11 \*\* 31 72042/37-MFC6040 MFC 6040 11 1 32 72040/37-CD4016 CD4016 33 72021/37-NE566 1 NE566 34 22103/19-311103! Trimpolt, 1 LOK Trimpolt, 35 22502/19-311502 1 БK Trimpolt, 36 22105/19-311105 1 1M 37 37000/24-160802 Capacitor, Electrolytic, 8,000 uf, 16V

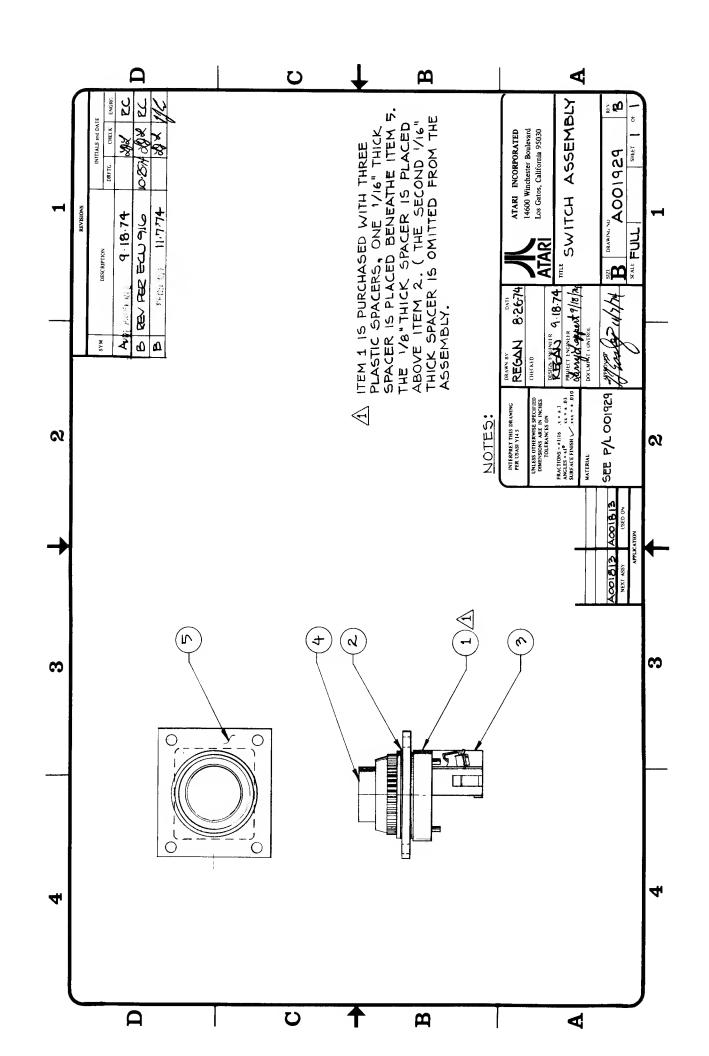
Title PCB ASSY. - PIN PONG - 60 HZ

sheet 2 of 2 Rev.

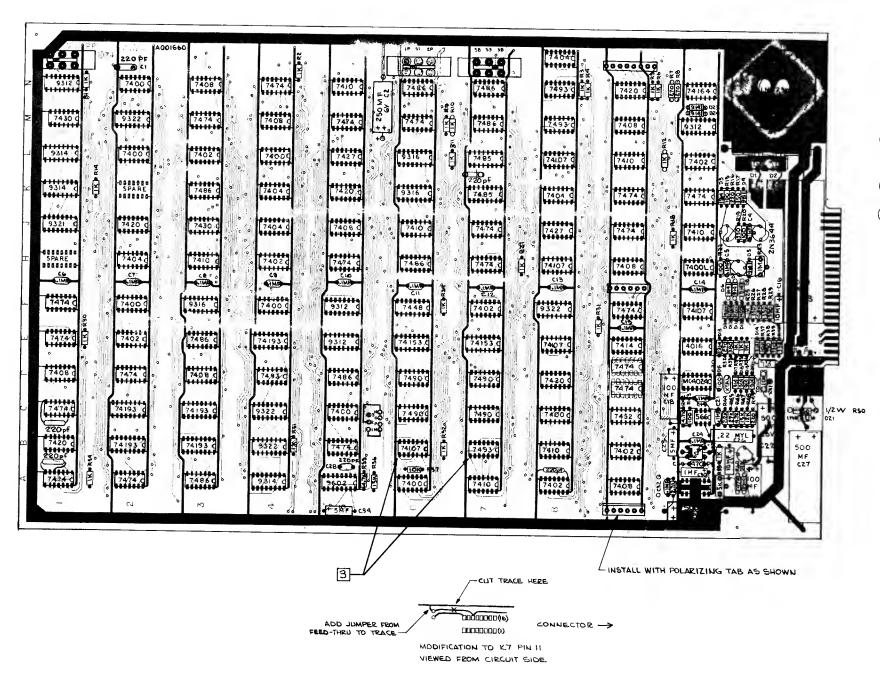
Item	Ġ
39	
39	
39	
40	
41	
42	ĺ
44 34101/27-101104 16 " Ceramic, Disc, .1 uf   45 32221/27-101224 1 " Mylar, .22 uf   46 30332/28-101471 1 " Mica, 470 pf   47 30101/28-101101 1 " 100 pf   48 30102/28-101221 6 " 220 pf   49 71001/31-1N4001 6 Diode, 1N 4001   50 31-1N1612 2 Diode, 1N 1612   51 71020/32-1N5237 1 Diode, 1N 914   52 71020/32-1N5237 1 Diode, 1N 712 (or 1N 5237), 8.2V Zener   53 70009/34-2N5190 1 Transistor, 2N 5190   54 70000/34-2N3643 3 Transistor, 2N 3643	
45   32221/27-101224   1	
46	
47   30101/28-101101   1   "   100 pf 48   30102/28-101221   6   "   220 pf 49   71001/31-1N4001   6   Diode, 1N 4001 50   31-1N1612   2   Diode, 1N 1612 51   71000/31-1N914   15   Diode, 1N 914 52   71020/32-1N5237   Diode, 1N 712 (or 1N 5237), 8.2V Zener 53   70009/34-2N5190   Transistor, 2N 5190 54   70000/34-2N3643   3   Transistor, 2N 3643	
48   30102/28-101221   6   "   220 pf 49   71001/31-1N4001   6   Diode, 1N 4001 50   31-1N1612   2   Diode, 1N 1612 51   71000/31-1N914   15   Diode, 1N 914 52   71020/32-1N5237   Diode, 1N 712 (or 1N 5237), 8.2V Zener 53   70009/34-2N5190   1 Transistor, 2N 5190 54   70000/34-2N3643   3 Transistor, 2N 3643	}
49    71001/31-1N4001   6	
51   71000/31-1N914   15   Diode, 1N 914   52   71020/32-1N5237   1 Diode, 1N 712 (or 1N 5237), 8.2V Zener   53   70009/34-2N5190   1 Transistor, 2N 5190   54   70000/34-2N3643   3 Transistor, 2N 3643	
52   71020/32-1N5237   Diode, 1N 712 (or 1N 5237), 8.2V Zener 53   70009/34-2N5190   Transistor, 2N 5190 54   70000/34-2N3643   3 Transistor, 2N 3643	
53 70009/34-2N5190 1 Transistor, 2N 5190 54 70000/34-2N3643 3 Transistor, 2N 3643	
54 70000/34-2N3643 3 Transistor, 2N 3643	
55   70001/34-2N3544   1   Transistor, 2N 3644	
56   19100/19-808W4PO 1   Resistor, 10 Watt, 4 ohm	
57   12103/11-0151   1	
58   11270/19-839C2P7 1   "   Carbon, ±5 %, ¼ Watt, 2.7 ohm	
59 11123/10-5123 1 " " " 12K ohm	
60   10101/10-0101   4     "       " ±10%, " 100 ohm	
61   10151/10-0151   1   "	i
03   102/1/10-02/1   3	
64   10331/10-0331   7	
66 10103/10-0103 2 " " 10K ohm	
67   10153/10-0153   2   "   " " " 15K ohm	
68   10181/10-0181   1   "     " " " 180 ohm	
69   10472/10-0472   4   "   " " " 4.7K ohm	
70   10273/10-0273   1   "   " " " 27K ohm	
71   10473/10-0473   1	
73   75100/72-1610C   2   Screw, Pan Head, SS, #6-32 x 5/8	- 1
74   75101/75-056   4   Washer, Internal Star, #6	
75   75102/75-016C   2   Washer, Flat, #6	
76   75188/75-1408C  3   Screw, Machine, Pan Hd., #4-40 x ½", SS	
77   75164/75-914S   3   Nut , Hex,   #4 -40	
78   75194/75-054   5   Washer, Internal Tooth Lock, #4-40	
79   75163/75-014S   2   Washer, Flat, #4-40 80   60000/69-001   3   Switch, DPDT	
80	
82 83014/78-06001 1 Wakefield Heatsink	
83 001925   Printed Circuit Board, Revision C	
84 79-20102 7 Useço 2006B Terminals	
85 79-58017 1 6 Pin Polarized Male P.C. Conn.	
86   001992   1     Heatsink, Dipde	
87   78-16002   A/R   Thermal Conductive Compound	
88   57-216   2   Buss Wire, #16AWG, 1社" Long	
89 75-050 2 Washer, Internal Tooth Lock, #10	
90   75-910S   2 Nut, Hex, #10-32 91   24-100105   1 Capacitor, Electrolytic, 1 uf, 10V	
91   24-100105   1   Capacitor, Electrolytic, 1 uf, 10V 92   10-0222   RESISTOR CARBON, 10%, 1/4W, 2.2K OHM	

P/L 001927 ASSEMBLY TITLE PIN PONG ELECTRONICS TRAY Page 1 of 1 PARTS LIST SPECIFICATION Drawn Mech. Eng. Checked Proj. Eng. Elec. Eng REV. leisure В Rev. Description Date Apprv. Rev. Description Date Apprv. A PROD REL 10/7/7  $\overline{s}$ REV PER ECN 893 10/21/74 15 Item Part Number Qty. DESCRIPTION 1 001551 Transformer 2 42-70102 1 Transformer Linefilter 3 90-3001 1 4 79-3201 1 Fuse Holder 5 46-20120 1 Fuse, 2A, Slo-Blo 6 68-001 1 Interlock Switch 7 1 Interlock Switch Bracket 000268 Screw, Sheet Metal, #6, Pan Hd., Phil., 2" 72-6608 20 8 9 001998 1 Transformer Cover Staple 10 71-301 1 Line Cord 11. 54-401 1 12 002439 1 Harness 1 Coin Counter 13 47-1001 Machine Screw, #8 x 12" 14 75-2824S 1 2 8-32 Nut 15 75-918S 16 75-018S 3 Washer, #8 17 A001995 1 Tray, Electronics 18 A001920 1 Harness, Voltage Selection 19\*|A001921-01 A/R Shorting Block, 95V 20\* A001921-02 A/R Shorting Block, 110V 21\* A001921-03 Shorting Block, 220V (High Line) A/R 22\* A001921-04 Shorting Block, 220V (Low Line) A/R 23 75-8808 4 Screw, Wood, Flat Hd., Phil., #8 x ½" Lg. A/R 24 78-25001 Cable Clamp 25 000871 1 Label 26 79-20101 1 Molex Male Pin 02-09-2011 27 79-58019 1 Molex Plug 03-09-2118 \*Install Shorting Block per voltage required

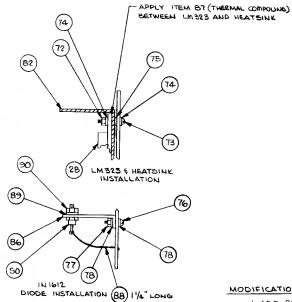




Job Title Dwg.**P/L** 001929 SWITCH ASSEMBLY PIN PONG Pist Shecification sheet 1 of 1 Drawn Cynthia Mech. Eng. 17 Rev. Checked Elec. Eng. darr Proj. Eng. Apprv. Apprv. Rev. Description Rev. Description A PREPROD REL 9/23/74 RC Rev per ECN 918 10/2 PROD REL 11/7/74 В Qty. Item Part. No. Description Switch, Push-button, Rundel (#R2) 1 60013/60-0102 1 Ring, Anti-Rotation (#SA 19) 2 60011/60-0301 1 Contact Block, SPST, N.O. Cap, Switch (Yellow), #AY 1 3 60012/60-0401 1 4 60014/60-0202 1 Bracket, Mounting, Control 001819 1



- 4. FOR 60 HZ, SEE P/L 001660-01. FOR 50 HZ, SEE P/L 001660-02.
- 3 INTEGRATED CIRCUITS 86 (74107) AND BT (7493) ARE LOADED FOR 50 HZ OPERATION ONLY.
- 2. ALL TRANSISTORS ARE 2N3643.
- I. ALL DIODE ARE IN914.
- NOTES: UNLESS OTHERWISE SPECIFIED.



## C PRODUCTION RELEASE \$ % DEEN PED ECH 75,81,812 \$ 925 \$ 7 F REV. PER ECH STI PEV. PER ECH 1071

## MODIFICATION LIST

- 1. ADD 220 pf CAPACITOR BETWEEN PINS 5 AND 7 OF AI.
- 2. ADD 220 PF CAPACITOR BETWEEN PINS 7 AND 13 OF CI.
- 3.00 CIRCUIT SIDE OF BOARD, CUT TRACE TO KT PIN II AND JUMPER TO ADJACENT TRACE AS SHOWN.
- 4. ADD 220 pf CAPACITOR BETWEEN PIN 1 OF AB AND GND BUSS.

